

This listing of claims will replace the prior version in the application.

1. (currently amended) A process for combating the corrosion by naphthenic acids of the metal walls of a refining plant, characterized in that it comprises the addition, to the a hydrocarbon stream to be treated by the refining plant, of an effective amount of a compound of formula:



in which:

- B represents a saturated divalent hydrocarbon radical which can either be acyclic, in the linear or branched form, or cyclic and which comprises from 1 to 18 carbon atoms, ~~preferably from 1 to 4~~; and
 - R represents a hydrogen atom, ~~or an alkali or alkaline earth metal, or an ammonium group, or an alkyl (linear or branched), cycloalkyl, aryl, alkaryl or arylalkyl radical, said radical comprising from 1 to 18 carbon atoms, preferably + to +10, and optionally one or more heteroatoms.~~
2. (currently amended) The process as claimed in claim 1, characterized in that ~~use is made, as the~~ compound of formula (I), of comprises thioglycolic acid or ~~of one of its esters thereof, preferably an aliphatic ester.~~
3. (currently amended) The process as claimed in ~~either of claims 1 and 2~~ claim 1, characterized in that ~~use is made of~~ said compound of formula (I) comprises 2-ethylhexyl thioglycolate, isooctyl thioglycolate or methyl thioglycolate.
4. (currently amended) The process as claimed in ~~one of claims 1 to 3~~ claim 1, characterized in that the amount of compound of formula (I) added corresponds to a concentration, expressed as equivalent weight of sulfur, with respect to the weight of the hydrocarbon stream, ranging from 10 to 5000 ppm, ~~preferably from 50 to 500 ppm.~~
5. (currently amended) The process as claimed in ~~one of claims 1 to 4~~ claim 1.

characterized in that the hydrocarbon stream to be treated has a TAN of greater than 0.2 and preferably of greater than 2.

6. (currently amended) The process as claimed in ~~one of claims 1 to 5~~ claim 1, characterized in that it is carried out at a temperature of between 200 and 450°C, and ~~more particularly between 250 and 350°C.~~
7. (currently amended) The process as claimed in ~~one of claims 1 to 6~~ claim 1, characterized in that the hydrocarbon stream to be treated is chosen from a petroleum crude oil, an atmospheric distillation residue, gas oil fractions resulting from atmospheric distillations, and gas oil fractions resulting from vacuum distillation, and a vacuum distillate ~~and or~~ residue resulting from vacuum distillation.
8. (new) The process as claimed in claim 1, characterized in that said divalent hydrocarbon radical comprises 1 to 4 carbon atoms.
9. (new) The process as claimed in claim 1, characterized in that said alkyl (linear or branched), cycloalkyl, aryl, alkylaryl or arylalkyl radical comprising from 1 to 10 carbon atoms.
10. (new) The process as claimed in claim 2, characterized in that said ester of thioglycolic acid comprises an aliphatic ester.
11. (new) The process as claimed in claim 1, characterized in that the amount of compound of formula (I) added corresponds to a concentration, expressed as equivalent weight of sulfur, with respect to the weight of the hydrocarbon stream, ranging from 50 to 500 ppm.
12. (new) The process as claimed in claim 1, characterized in that the hydrocarbon stream to be treated has a TAN of greater than 2.
13. (new) The process as claimed in claim 1 characterized in that it is carried out at a temperature between 250 and 350° C.